



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/913,921	01/24/2002	Michael Turner	60556-303420	8250

22434 7590 10/31/2003

BEYER WEAVER & THOMAS LLP
P.O. BOX 778
BERKELEY, CA 94704-0778

EXAMINER

HIRL, JOSEPH P

ART UNIT	PAPER NUMBER
----------	--------------

2121

DATE MAILED: 10/31/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/913,921

Applicant(s)

TURNER ET AL.

Examiner

Joseph P. Hirl

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-10 are pending in this application.
2. The claims and only the claims form the metes and bounds of the invention.
"Office personnel are to give the claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. *In re Prater*, 415 F.2d, 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969)" (MPEP p 2100-8, c 2, I 45-48; p 2100-9, c 1, I 1-4). The Examiner has full latitude to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

Drawings

3. The drawings are objected to because of the following:
The PCT notations should be removed.
These objections must be corrected.

Specification

4. The specification is objected to because it does not follow the requirements of MPEP 608.01(a). Specifically:

Arrangement of the Specification

5. As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC
(See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The objections must be corrected.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Smyth (USP 5,465,321, referred to as **Smyth**).

Claims 1, 7, 9

Smyth anticipates (i) providing a data representation for each item in the data set (**Smyth**, c 15, l 57-59); (ii) providing a query representation of the query item (**Smyth**, c 15, l 61-63); (iii) defining a transformation space (**Smyth**, c 15, l 26-33; c 15, l 57-59); (iv) for each of a number of regions spanning the entire transformation space, determining an upper bound to the probability of a match between the query representation and a data representation under any transformation in, the region (**Smyth**, c 15, l 4-5; c 15, l 64-67; c 16, l 1); (v) determining a threshold probability (**Smyth**, c 15, l 31-33; c 16, l 2-12); (vi) comparing the upper probability bound of each region with the threshold probability (**Smyth**, c 15, l 43-46); and (vii) determining regions having an upper probability bound greater than the threshold probability, so as to identify solution regions (**Smyth**, c 16, l 13-15).

Claim 2

Smyth anticipates sub-dividing the solution regions into further regions which span the solution regions (**Smyth**, c 15, l 26-33: Examiner's Note (EN): use of prior

Art Unit: 2121

knowledge will accommodate refinement or subdivision); determining a new upper bound (**Smyth**, c 15, l 4-5; c 15, l 64-67; c 16, l 1); determining a new threshold probability (**Smyth**, c 15, l 31-33; c 16, l 2-12); and determining new solution regions (**Smyth**, c 16, l 13-15; EN: input data is a time series which facilitates the constant or iterative calculation).

Claim 3

Smyth anticipates the step of iterating the further method steps of claim 2 so as to identify the solution region containing the best matching solution or to identify a set of solution regions containing a set of best matching solutions (**Smyth**, c 15, l 57-67; c 16, l 1-15; EN: input data is a time series which facilitates the constant or iterative calculation to the best or most current solution).

Claims 4, 5

Smyth anticipates data representations are topological representations of the data items and the query representation is a topological representation of the query item (**Smyth**, c 15, l 57-67; c 16, l 1-15; EN: Para 2 above applies; topological data or group has the features of an abstract group in which the group operations are continuous; the data input is time series or continuous and the variables are abstract representations of the related limits of operation).

Claim 5

Smyth anticipates topological representation of the data items and query item comprises a set of node measurement vectors, each node measurement vector being associated with a node of a topological arrangement of nodes defining the items

Art Unit: 2121

(**Smyth**, c 15, l 57-67; c 16, l 1-15; EN: Para 2 above applies; topological data or group has the features of an abstract group in which the group operations are continuous; the data input is time series or continuous and the variables are abstract representations of the related limits of operation; values for W_i are numerical operational values that represent vectors; the vectors are the nodes that define the items or data).

Claim 6

Smyth anticipates which the upper bound is determined using Bayesian probability theory (**Smyth**, c 15, l 13-25).

Claims 8, 10

Smyth anticipates a computer program which when running on a computer carries out a method as claimed in claim 1 (**Smyth**, c 37, Claim 25; Para 2 applies; to one of ordinary skill in the art, the apparatus of Claim 25 is synonymous with computer and the "means for" cited therein provides computer features and software).

Conclusion

7. The prior art of record and not relied upon is considered pertinent to applicant's disclosure.

Fayyad et al, USP 6,374,251

8. Claims 1-10 are rejected.

Correspondence Information

Any inquiry concerning this information or related to the subject disclosure should be directed to the Examiner, Joseph P. Hirl, whose telephone number is (703) 305-1668. The Examiner can be reached on Monday – Thursday from 6:00 a.m. to 4:30 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Anil Khatri can be reached at (703) 305-0282.

Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks,

Washington, D. C. 20231;

or faxed to:

(703) 746-7239 (for formal communications intended for entry);

or faxed to:

(703) 746-7290 (for informal or draft communications with notation of "Proposed" or "Draft" for the desk of the Examiner).

Hand-delivered responses should be brought to:

Receptionist, Crystal Park II

2121 Crystal Drive,

Arlington, Virginia.

Joseph P. Hirl



October 28, 2003



ANIL KHATRI
SUPERVISORY PATENT EXAMINER